UNC SCHOOL OF MEDICINE
Allied Health Sciences

Project Core

Center for Literacy and Disability Studies

Research Specific to: Augmentative and Alternative Communication

Augmentative and Alternative Communication (AAC) is an intervention approach that addresses the needs of individuals with complex communication needs. The research studies below focus specifically on the research supporting the use of aided AAC. In contrast to unaided AAC, aided AAC involves the use of external supports such as, picture communication boards, line drawings, graphic-symbols, devices with speech output or speech-generating devices, or tangible objects to help the individual express thoughts, wants and needs, feelings, and ideas (ASHA, 2018).

Research

1. Ganz, J.B., Rispoli, M.J., Mason, R.A., & Hong, E.R. (2014). Moderation of effects of AAC based on setting and types of aided AAC on outcome variables: An aggregate study of single-case research with individuals with ASD. *Developmental Neurorehabilitation*, 17(3), 184-192. doi: 10.3109/17518423.2012.748097

   Summary: The purpose of this meta-analysis was to evaluate the potential moderating effects of intervention setting and type of aided AAC on outcome variables for students with ASD. The results suggest that AAC is effective home, therapy room, self-contained classroom, and general education settings. However, the greatest gains were associated with intervention in general education settings. In addition, Picture Exchange Communication System (PECS), speech-generating devices, and other picture-based communication were compared. Each was beneficial with varying impacts on social, academic, communication, and challenging behaviors.

2. Romski, M.A., & Sevcik, R.A. (1996). *Breaking the Speech Barrier: Language Development through Augmented Means.* Baltimore, MA: Brookes Publishing.

   Summary: This longitudinal intervention study examined the use of system of augmented language (SAL) to support school-age children with moderate or severe intellectual disabilities with complex communication needs in both school and home. The SAL approach was comprised of: (a) a speech-generating device with graphic symbols; (b) communication partners demonstrating the use of the graphic symbols; (c) communication partners responding to the children's nonverbal communication; and (d) encouragement to use AAC in natural communicative exchanges. Students had access to multiple symbols from the beginning. The

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students' communication initiations increased as they incorporated the use of aided AAC into their existing communicative repertoire. Through SAL, the students improved expressive and receptive vocabulary, use of spoken words, sight word recognition, and communication skills; thus, improving their participation in social and educational settings.

3. Romski, M.A., Sevcik, R.A., Adamson, L.B., Cheslock, M., … Bakeman, R. (2010). Randomized comparison of augmented and nonaugmented language interventions for toddler with developmental delays with their parents. *Journal of Speech, Language, and Hearing Research*, 53, 350-364. doi: 10.1044/1092-4388(2009/08-0156)

Summary: This experimental study compared the impact of interventions that did and did not include aided AAC on child communication outcomes. Children and their parents were randomly assigned to the different conditions. All parents received training and support. The children who were assigned to groups that included the use of aided AAC had larger expressive vocabularies and better communication outcomes than the children in the speech-only group.

4. Walker, V. L., & Snell, M. E. (2013). Effects of augmentative and alternative communication on challenging behavior: A meta-analysis. *Augmentative and Alternative Communication,* 29(2), 117-131. doi:10.3109/07434618.2013.785020.

Summary: This meta-analysis examined 54 existing studies to determine the effectiveness of AAC as a means of reducing challenging behavior. Results suggest that AAC in general is an effective means of reducing challenging behaviors. However, AAC is generally more effective when implemented beginning in childhood.

Further References

The following articles show success in introducing AAC intervention to emergent communicators:

Branson, D. & Demchak, M. (2009). The use of augmentative and alternative communication methods with infants and toddlers with disabilities: A research review. *Augmentative and Alternative Communication*, 25 (4), 274-286. DOI: 10.3109/07434610903384529

Goossens, C. (1989). Aided communication intervention before assessment: A case study of a child with cerebral palsy. *Augmentative and Alternative Communication*. 5, 14 – 26. doi: 10.1080/07434618912331274926

Light, J., Collier, B., & Parnes, P. (1985). Communicative interaction between young nonspeaking physically disabled children and their primary caregivers: Part I—discourse patterns. *Augmentative and Alternative Communication,* 1:2, 74-83,

The following articles provides evidence that AAC intervention supports individuals of all ages, disability types, and cognitive profiles with no required prerequisites:

Ganz, J.B., Earles-Vollrath T.L., Mason, R.A., Rispoli, M.J., Heath, A.K., & Parker, R.I. (2011). An aggregate study of single-case research involving aided AAC: Participant characteristics of individuals with autism spectrum disorders. *Research in Autism Spectrum Disorders,*5, 1500-1509. doi: 10.1016/j.rasd.2011.01.011

Ganz, J.B., Morin, K.L., Foster, M.J., Vannest, K.J., Tosun, D.G., Gregori, E.V., & Gerow, S.L. (2017). High-technology augmentative and alternative communication for individuals with intellectual and developmental disabilities and complex communication needs: A meta-analysis. Augmentative *and Alternative Communication, 33*, 224–238. doi:10.1080/07434618.2017.1373855

Millar, D.C., Light, C., & Schlosser, R.W. (2006). The impact of augmentative and alternative communication intervention on the speech production of individuals with developmental disabilities: A research review. *Journal of Speech, Language, and Hearing Research*, 49 (2), 248-254. doi: 10.1044/1092-4388(2006/021)

Romski, M.A. & Sevcik, R.A. (2005). Augmentative Communication and Early Intervention: Myths and Realities. *Infants and Young Children,* 18, 174-185. doi: 10.1097/00001163-200507000-00002

Zeina, R., AL-Ayadhi, L., & Bashir, S. (2005). The impact of IQ on using high-tech augmentative alternative communication (AAC) in children with autism spectrum disorder (ASD). *Procedia-Social and Behavioral Sciences,*171, 366-373. doi:10.1016/j.sbspro.2015.01.134